

Satellite Imagery Worksheet—ANSWERS

A. What were the local conditions at your reef on September 2nd, 2005?

1. What was the temperature at your reef on that day?
B: 28°C; LSI: 30°C; PR: 29°C; USVI: 29°C
2. Was your site unusually warm? If so, what was the anomaly?
B: +0.75°C; LSI: +0.25°C; PR: +0.75°C; USVI: +1°C

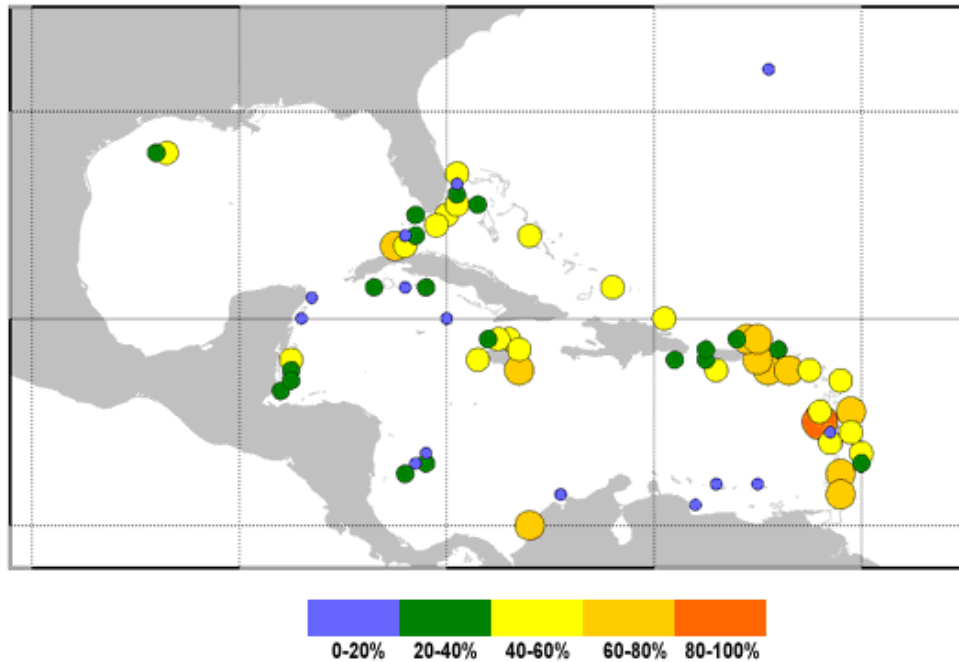
B. How hot was the whole late Summer / early Fall season?

- 3a. What was the highest temperature?
B: 28.5°C; LSI: 31°C; PR: 30.5°C; USVI: 30°C
- 3b. How long did the temperature stay at or above the bleaching threshold?
B: about a month; LSI: 1 month, then a decrease, then another month; PR: 2 months;
USVI: 3½ months
4. How high did the DHWs get?
B: 3 DHW; LSI: 6 DHW; PR: 8 DHW; USVI: 11 DHW
5. Do you expect that there was coral bleaching at your reef site in 2005? How severe?
B: mild, if any; LSI: moderate; PR: severe; USVI: very severe

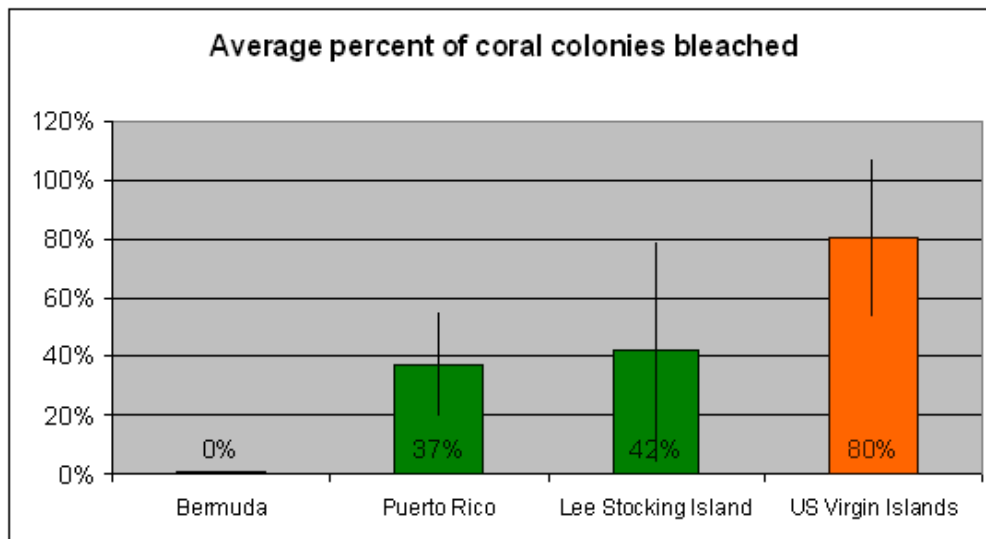
C. How stressed was your reef site compared to other reefs in the Caribbean region?

6. How did the thermal stress at your site compare to the stress experienced by the other three reefs highlighted in this exercise?
B < LSI < PR < USVI or B < LSI = PR < USVI
7. How severe was the bleaching at your site compared to the other three reefs?
B < LSI < PR < USVI or B < LSI = PR < USVI

So how bad was the bleaching, really?



Regional observations from over 1500 on-site surveys conducted during the 2005 bleaching event. Each dot represents the average percentage of the coral colonies bleached at that location.



Bleaching surveys within 50 km of the four sites in this exercise. As expected, the bleaching was worst in the US Virgin Islands, where about 80% of the coral colonies were bleached. Puerto Rico had 37% of colonies bleached; LSI had 42%. Note that there is a lot of variability in the data (shown by the error bars); Puerto Rico and the Lee Stocking Island were statistically identical. In Bermuda the bleaching was very light: less than 1% of coral colonies bleached.

Thermal stress: B < LSI < PR < USVI

Actual bleaching data: B < LSI = PR < USVI